

Applicant : S. R. Narayanan, et al.
Serial No. : 09/489,515
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Attorney's Docket No.: 06618-408001 / CIT2942 USC 2861

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-10. (Cancelled)

11-17. (Cancelled).

18. (Currently Amended) ~~The A process of claim 17 for making an electrode for a fuel cell, consisting essentially of;~~

~~(a) providing a catalyst ink comprising a catalytic material, and poly(vinylidene fluoride);~~

~~(b) applying the catalyst ink to at least one side of a substrate, wherein the backing substrate is a carbon paper backing; and~~

~~(c) drying the catalyst ink on the substrate.~~

19. (Currently amended) A process for making a membrane electrode assembly for a fuel cell, comprising:

(a) providing a catalyst ink comprising a catalytic material, and poly(vinylidene fluoride);

(b) applying the catalyst ink to at least one side of a PSSA-PVDF membrane; and

(c) bonding the membrane to at least one electrode.

20. (Previously presented) The process of claim 19, wherein the membrane is bonded to the electrode at a temperature of greater than about 180 °C.

21. (Previously presented) The process of claim 19, wherein the catalyst ink further comprises a plasticizer.

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22. (Previously presented) The process of claim 21, wherein the plasticizer is N,N dimethylacetamide.

23. (Previously presented) The process of claim 19, further comprising adding to the catalyst ink a second ionomer comprising a liquid copolymer of tetrafluoroethylene and perfluorovinylethersulfonic acid.

24. (Previously presented) The process of claim 19, further comprising roughening a surface of the membrane prior to applying the catalyst ink.

25. (Previously presented) The process of claim 19, wherein the electrode comprises a catalyst layer comprising a catalytic material selected from Pt, Pt/Ru and an ionomer.

26. (Currently amended) A fuel cell comprising a membrane electrode assembly, wherein the membrane electrode assembly is made by the process of:

- (a) providing a catalyst ink comprising a catalytic material, and poly(vinylidene fluoride);
- (b) applying the catalyst ink to at least one side of a PSSA-PVDF membrane; and
- (c) bonding the membrane to at least one electrode.

27. (Currently amended) A process for making an electrode for a fuel cell, comprising:

- (a) providing a catalyst ink comprising a catalytic material, and poly(vinylidene fluoride); and
- (b) applying the catalyst ink to at least one side of a PSSA-PVDF membrane.

28. (Cancelled).

29. (Previously presented) The process of claim 27, wherein the ink further comprises a plasticizer.

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30. (Previously presented) The process of claim 29, wherein the plasticizer is N,N dimethylacetamide.

31. (Previously presented) The process of claim 27, further comprising roughening a surface of the membrane prior to applying the catalyst ink.